

Appl No. 10/790,929
Response Date: 12/22/05
Response to Office Action

AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings includes changes to Figures 1, 5, and 10. These sheets replace the original sheets including Figures 1, 5, and 10. In Figures 1, 5, and 10, previously included reference character "64" has been deleted.

Attachment: Replacement Sheet
Annotated Sheet Showing Changes

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REMARKS/ARGUMENTS

Summary of the Amendment

Upon entry of the present Amendment, Claims 1 and 3 will have been amended, Claims 18-19 cancelled, and Claims 21-22 newly added. Accordingly, Claims 1-7 and 21-22 are currently pending.

By the present Amendment and Remarks, Applicant submits that the rejections have been overcome, and respectfully requests reconsideration of the Office Action and allowance of the present application at the Examiner's earliest convenience.

Summary of the Official Office Action

Objections

The drawings were objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 64.

Claim Rejections

Claim 18 was rejected under 35 U.S.C. 102(e) as being anticipated by Tanaka et al. (US 2005/0041226 A1).

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Claims 1-5 and 19 were rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (US 2005/0041226 A1) in view of Emoto et al. (US 2003/0035988 A1).

Claims 6-7 were rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (US 2005/0041226 A1) in view of Emoto et al. (US 2003/0035988 A1) and further in view of Mori et al. (U.S. Pat. 6,268,904).

As a result of reviewing the above cited art, Applicant believes that the Office Action contains a typographical error with respect to the published application number for Emoto et al. According to the United States Patent and Trademark Office's on-line issued patents and published applications database, published application number US 2003/0035988 A1 is associated with United States Patent Application Graage, Klaus, whose title is "Fuel cell installation with a gas generation system and a fuel cell system."

Applicant, based on a search of the on-line database and the content of the rejection of Claims 1-5 and 19, believes the correct published application number for Emoto et al. is US 2003/0035088. This is consistent with the published application number listed in the Notice of References cited that accompanied the Office Action. As such, the following remarks and arguments were based on published application number US 2003/0035088. Applicant respectfully requests the Examiner contact the Applicant's undersigned attorney in the event that Applicant's presumption is incorrect.

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Response to Objection of Drawings

In response to the objection that the drawings included character 64 which was not mentioned in the description, per the replacement sheets, Figures 1, 5, and 10 have been amended to remove character 64..

In lieu of the Amendments to Figures 1, 5, and 10, Applicant respectfully requests the Examiner withdraw the objections to the drawings.

Traversal of Rejection under 35 U.S.C. 103(a)

Rejection of Claims 1-5

Applicant respectfully traverses the rejection of Claims 1-5 under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (US 2005/0041226 A1) [hereinafter "Tanaka"] in view of Emoto et al. (US 2003/0035088 A1) [hereinafter "Emoto"].

Independent Claim 1 as amended is directed to an exposure apparatus comprising an irradiation optical system for irradiating a pattern formed on an original plate with light emitted from a light source, a projection optical system for projecting a light image from said pattern onto a substrate, a drivable substrate stage for mounting said substrate, and a light absorber disposed on said substrate stage, wherein said light absorber is disposed on said substrate by a thermal insulating layer.

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Applicant respectfully submits that the combined teachings of Tanaka and Emoto clearly do not teach or suggest any embodiment of an exposure apparatus having the aforementioned features recited in Independent Claim 1.

The Office Action concedes that Tanaka lacks showing a light absorber being disposed on the substrate stage by a thermal insulating layer. To make up for this deficiency, the Office Action references Emoto as disclosing "a position apparatus for supporting a substrate wherein a radiation plate (200)/light absorber is displaced on a cooling unit (202) and the cooling unit comprises a heat releasing member (108). According to the Office Action, it would have been obvious to combine the teachings of Tanaka and Emoto to obtain the invention of the claims of the present invention. More specifically, the Office Action indicates it would have been obvious to employ the cooling unit, as well as the heat-releasing member as taught by Emoto into the exposure apparatus of Tanaka for the purpose of reducing the heat produced from the substrate due to the exposure light and thus avoiding of the thermal expansion of substrate.

Turning to Emoto, paragraph 0042 and FIG. 3 describe the heat exchange portion, including the radiation plate, of the Emoto invention. As is shown in FIG. 3 and described in paragraph 0042, a Peltier element (201) is provided on the back surface of the radiation plate (200), and a cooling plate (202) is provided on the heat exhaust side of the Peltier element (201). The cooling plate (202) exchanges heat with a temperature-controlled refrigerant that is sent through a releasing member/pipe (108). Thus according to FIG. 3 and paragraph 0042, the heat-releasing member as taught by Emoto consists of the Peltier element (201), the cooling plate (202) and the releasing member/pipe (108).

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To establish a prima facie case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See Litton Industrial Products v. Solid State Systems, Corp., 755 F. 2d 158, 164, 225 U.S.P.Q. 34, 38 (Fed. Cir. 1985) ("The references fail not only to expressly disclose the claimed invention as a whole, but also to suggest to one of ordinary skill in the art modifications needed to meet all the claim limitations.

Applicant respectfully submits that the combination of Tanaka and Emoto does not teach or suggest the present invention's claimed feature of a light absorber disposed on a substrate stage by a thermal insulating layer. Rather, the combination of Tanaka and Emoto is seen to describe a position apparatus with a heat-releasing member comprising a Peltier element, cooling plate, and pipe.

Accordingly, Applicant respectfully submits that since the combination of Tanaka and Emoto does not disclose or suggests at least the above-noted features of the present invention, the rejection of at least Independent Claim 1 under 35 U.S.C. 103(a) is improper and should be withdrawn for this reason.

Furthermore, Applicant submits that dependent Claims 2-5 are allowable for the reason that these claims depend from allowable Independent Claim 1 and because these claims recite additional features that further define the present invention.

Accordingly, Applicant requests that the Examiner reconsider and withdraw the rejections of dependent Claims 2-5 under 35 U.S.C. 103(a) and indicate that these Claims are allowable.

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Rejection of Claims 6-7

Applicant respectfully traverses the rejection of Claims 6-7 under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (US 2005/0041226 A1) [hereinafter "Tanaka"] in view of Emoto et al. (US 2003/0035088 A1) [hereinafter "Emoto"] and further in view of Mori et al. (U.S. Patent 6,268,904) [hereinafter "Mori"].

Applicant submits that dependent Claims 6-7 are allowable for the reason that these claims depend from allowable Independent Claim 1 and because they claims recite additional features that further define the present invention.

Accordingly Applicant requests that Examiner reconsider and withdraw the rejections of dependent Claims 6-7 under 35 U.S.C. 103(a) and indicate that these Claims are allowable.

Newly Added Dependent Claims 21-22

Applicant submits that newly added dependent Claims 21-22 are allowable for the reason that these claims depend from allowable Independent Claim 1 and because the claims recite additional features that further define the present invention.

Accordingly, Applicant requests that the Examiner indicate that these Claims are allowable.

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CONCLUSION

In view of the foregoing, it is submitted that none of the references of record, when considered alone or in any proper combination thereof, anticipate or render obvious Applicant's invention as recited in Claims 1-7 and 21-22. The applied references of record have been discussed and distinguished, while significant claim features of the present invention have been pointed out.

Applicant respectfully submits that each and every pending claim of the present application meets the requirements for patentability under 35 U.S.C. 103. Accordingly, allowance of the present application and all the claims therein is respectfully requested and believed to be appropriate.

Further, any amendments to the claims which have been made in this response and which have not been made to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

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Applicant's undersigned attorney may be reached at our Irvine, California office at (949) 932-3329. All correspondences should continue to be directed to our below-listed address.

Respectfully submitted



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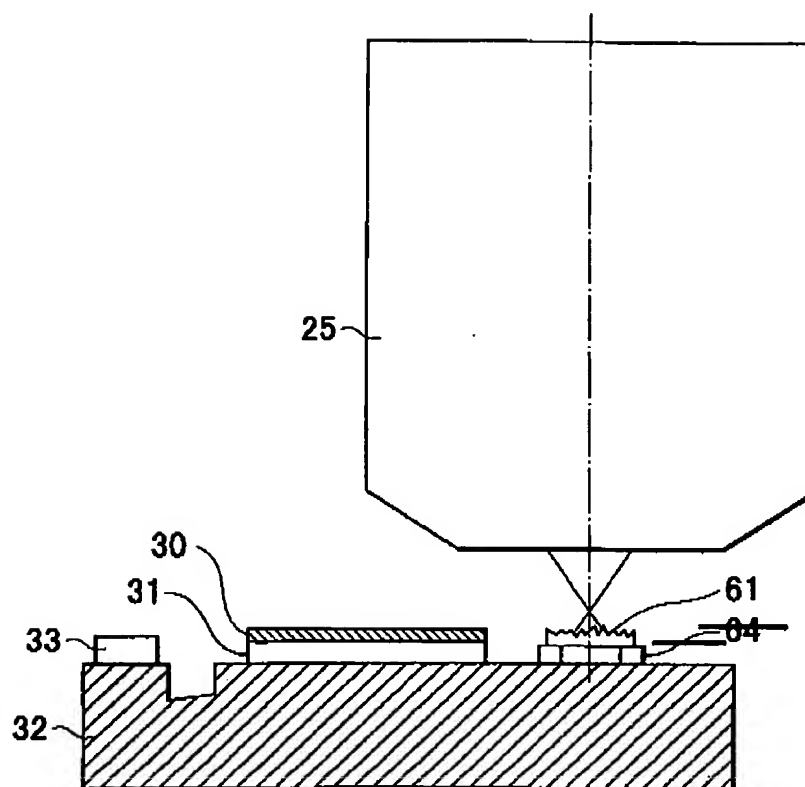
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FIG. 1



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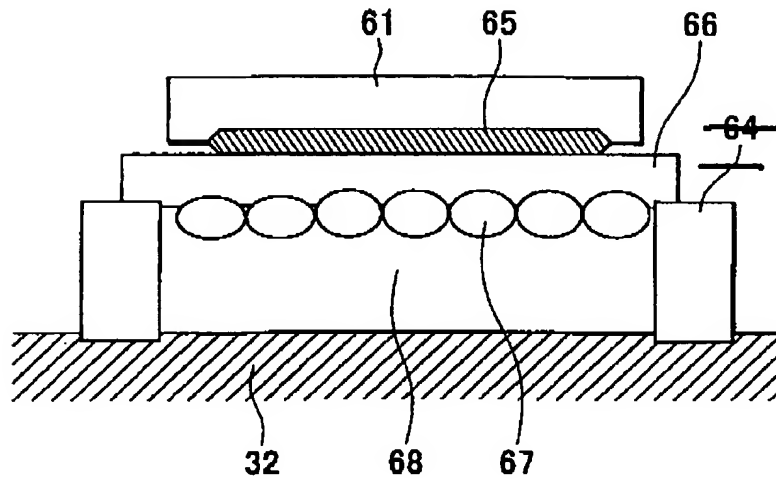
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FIG. 5



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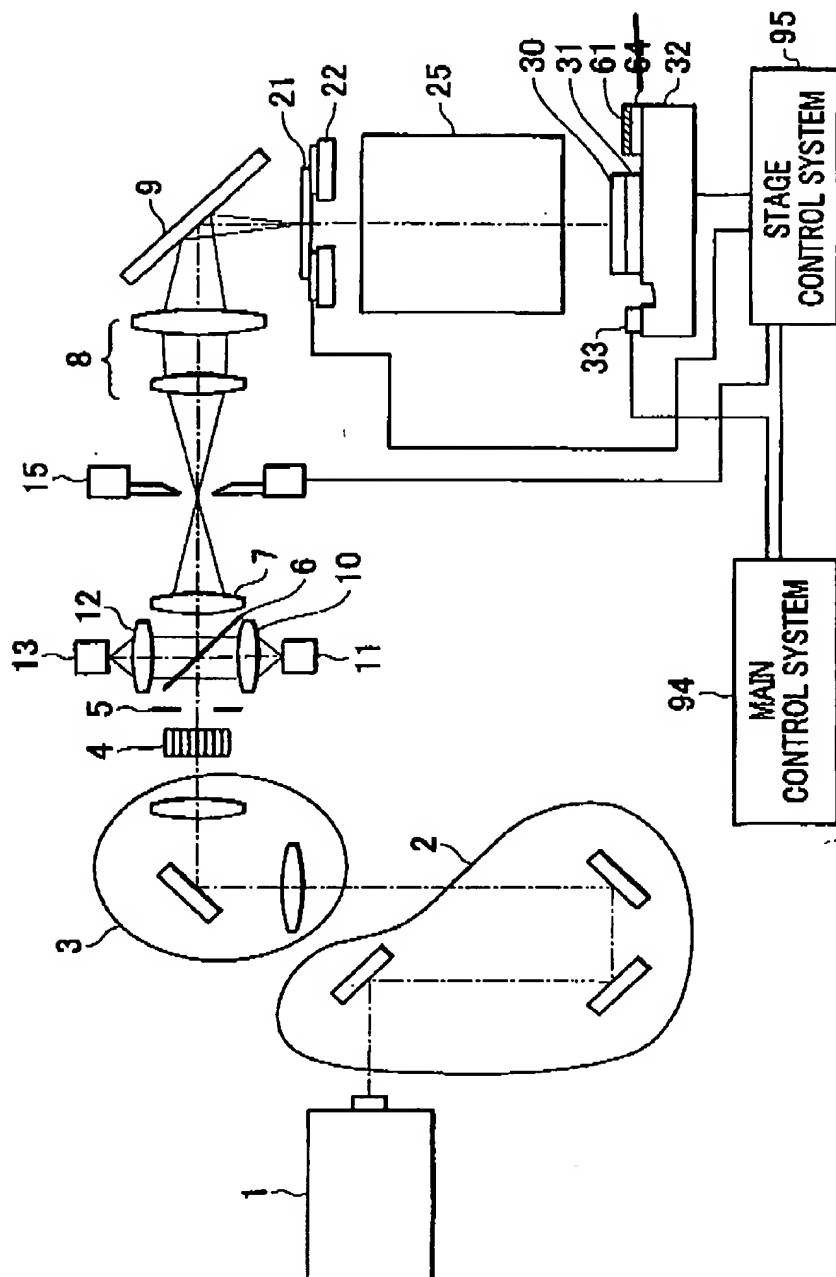
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FIG. 10



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